Abstract

Light source having an LED and a luminescence conversion body and method for producing the luminescence conversion body

The invention relates to a light source (1), having at least one LED (2) for emitting a primary radiation (4) and at least one luminescence conversion body (3) having at least one luminescent material for converting the primary radiation (4) into a secondary radiation (5). The luminescence conversion body is a polycrystalline ceramic body. The LED is based on GaInN and emits blue primary radiation. The ceramic body comprises for example a luminescent material based on a cerium-doped yttrium aluminum garnet. This luminescent material emits yellow secondary radiation. Blue primary radiation and yellow secondary radiation penetrate through the luminescence conversion body and are perceived as white light by the observer. In order to produce the luminescence conversion body, provision is made of a polycrystalline ceramic body which is united with a solution of a dopant. By means of a thermal treatment, the dopant (activator) diffuses into the ceramic body, the luminescent material being formed.

figure 1